IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
SOUTHERN DIVISION
Case No. 7:23-CV-897

IN RE:	)	
CAMP LEJEUNE WATER LITIGATION	)	**UNITED STATES' OPPOSITION TO**
	)	**PLG'S MOTION TO EXCLUDE**
	)	**CERTAIN OPINIONS OF REMY J.-C.**
This Document Relates To:	)	**HENNET, PH.D.**
ALL CASES	)	
	)	

INTRODUCTION

The Court should deny PLG's motion to exclude four opinions offered by the United States' expert geochemist and geohydrologist Dr. Remy Hennet. Contrary to PLG's arguments, Dr. Hennet's opinions are the result of reliably applying foundational scientific principles and methodologies to sufficient facts and data. In fact, Dr. Hennet employed some of the same principles and methodologies as PLG's experts.

Each of PLG's arguments to exclude Dr. Hennet's opinions are fundamentally flawed. First, PLG claims that Dr. Hennet has no method for selecting representative flow paths to estimate the range of times it likely would have taken PCE to travel from the aquifer below ABC One-Hour Cleaners to one of the Tarawa Terrace supply wells. This ignores that: (1) Dr. Hennet, like PLG's expert Dr. Konikow, used flow paths to calculate the time for PCE to travel from ABC One-Hour Cleaners to well TT-26 through the Agency for Toxic Substances and Disease Registry (ATSDR's) conceptual model of the aquifer at Tarawa Terrace and (2) Dr. Hennet selected flow paths representative of the plume predicted by the ATSDR's numerical water model that PLG's experts assert was reliable. Because Dr. Hennet's "methods are very similar to those of the other engineers, his methods likely have acceptance within a relevant scientific community[,]" and PLG's argument

fails. *Browder v. State Farm Fire and Casualty Company*, No. 1:20-cv-26, 2021 WL 2517681, at *6 (W.D.N.C Jun. 18, 2021).

Second, PLG claims that Dr. Hennet has no scientific basis for his opinion that Hadnot Point water supply well HP-634 was uncontaminated with TCE. This raises factual disputes rather than challenges Dr. Hennet's methodologies. Because "'questions regarding the factual underpinnings of [an expert witness's] opinion affect the weight and credibility' of the witness' assessment, 'not its admissibility[,]'" PLG's argument fails. *See Bresler v. Wilmington Trust Co.*, 855 F.3d 178, 195 (4th Cir. 2017) (quoting *Structural Polymer Grp. v. Zoltek Corp.*, 543 F.3d 987, 997 (8th Cir. 2008)).

Third, PLG claims that Dr. Hennet's opinion on volatilization of the contaminants of concern ("COCs") from filling a water buffalo through a manhole is overly speculative. This ignores that Dr. Hennet arrived at his opinion by applying the same method he used to estimate the losses from filling a water buffalo through a filler pipe, which is the same method used by PLG's expert to estimate the losses from filling through a manhole. Again, because Dr. Hennet's "methods are very similar to those of the other engineers, his methods likely have acceptance within a relevant scientific community[,]" and PLG's argument fails. *Browder*, 2021 WL 2517681 at *6.

Fourth, PLG claims that Dr. Hennet did not explain how his experience led him to conclude that some portion of COCs were lost to sorption during water treatment. This ignores the fact that the primary basis for this opinion was a chemical phenomenon that is: (1) recognized by PLG's own experts; and (2) described in a textbook that Dr. Hennet cited. Dr. Hennet explained that he relied on his extensive education and experience studying the fate of organic chemicals, like the COCs, in the environment only to *qualitatively* discuss the magnitude of those losses, just as PLG's

expert did. Yet again, because Dr. Hennet's "methods are very similar to those of the other engineers, his methods likely have acceptance within a relevant scientific community[,]" and PLG's argument fails. *Id*.

FACTS

The United States disclosed a Phase I expert report from Dr. Remy Hennet, a Doctor of Philosophy in geochemistry with over 30 years of experience studying the fate of organic chemicals in the environment, including the COCs at issue in this case. D.E. 374-3 at 80. Dr. Hennet's report included: (1) an overview of geology, hydrogeology, and geochemistry applicable to the groundwater supply at Camp Lejeune; (2) a primer on the COCs and their sources; and (3) a summary of the limited historical contaminant concentration data at Camp Lejeune. *Id.* at 4-5. The report also contained Dr. Hennet's opinions on: (1) the extent of groundwater contamination by the COCs at Camp Lejeune and when the COCs likely arrived in the Camp Lejeune water systems; (2) the likely COC losses from volatilization and sorption during water treatment and storage that were not accounted for in the ATSDR's models; (3) the scientific validity of several of the ATSDR's modeling decisions; and (4) the likely COC losses from volatilization during the filling of water buffaloes. *Id.*

Dr. Hennet Estimated a Reasonable Range of Times that PCE Likely Arrived at Well TT-26 Using Flow Paths Representative of the PCE Plume Geometry and Evolution Predicted by ATSDR's Model.

Dr. Hennet opined that elevated PCE concentrations likely first arrived at supply well TT-26 in the 1970s. D.E. 374-3 at 49. To arrive at this opinion, Dr. Hennet first *adopted the ATSDR's conceptual framework* for the development and migration of a PCE plume from ABC One-Hour Cleaners to well TT-26, including its evolution in the aquifer layers that the ATSDR modeled as layers 1 and 3. *Id.* at 49-50, 109–12 (explaining that Dr. Hennet calculated hydraulic gradient from

potentiometric surfaces included in Attachment D to Dr. Hennet's report—*i.e.*, the ATSDR's modeled potentiometric surfaces for Tarawa Terrace and figures of plume geometry predicted by ATSDR). In fact, Dr. Hennet deviated from the ATSDR's approach in only two ways. First, Dr. Hennet corrected several parameter errors in the ATSDR model, which had (1) the wrong start date for ABC One-Hour Cleaners and (2) an unreasonable conclusion regarding the rate at which PCE traveled relative to groundwater due to a miscalculation and failure to use site-specific data. *Id.* at 49.

Second, Dr. Hennet selected flow paths for individual PCE molecules that are representative of the general geometry and evolution of the plume predicted ATSDR's model. *See id.* at 48-49 & Attachment D. He used those flow paths to calculate travel times for PCE arriving at well TT-26 from different parts of the plume. *Id.* at 49. Unlike the ATSDR, he did not attempt to quantify concentrations through time because, as he explained in an opinion that PLG does not challenge, there was insufficient data to do so. As his report states:

> In order to generate [contaminant] concentration estimates in the water supplies modeled, ATSDR had to make the general assumption that in the absence of [contaminant] concentration data in the water supplies prior to 1980, information on supply wells and water treatment plants would be sufficient information to extrapolate quantitatively the [contaminant] concentrations measured in the 1980s back to 1953. This assumption is deficient as it implies that there is quantitative and reliable data and information for [various parameters] for which there is very little reliable data. ATSDR professional judgment and estimates for these unknowns are not verifiable and the ATSDR model results are just a particular rendition of historic estimates for [contaminant] concentrations in the water supply of the Base. ATSDR estimates are therefore not quantitatively reliable as different plausible assumptions would lead to different results.

Id. at 69; *see also id.* at 33-34 (illustrating periods for which contaminant concentrations are unavailable). Dr. Hennet's opinions are consistent with the opinions of contemporaneous reviewers of ATSDR's model for Tarawa Terrace, such as the Navy and Dr. Prabhakhar Clement, the groundwater modeler who served on the National Research Council committee. *See* Jun. 19,

2008, Navy Letter, D.E. 370-5, at 7 ("[T]he goal of the Tarawa Terrace model is to reconstruct PCE concentrations on a monthly basis over approximately 30 years in order to conduct a health study. This is an extremely difficult goal since measured PCE concentrations are not available prior to 1982, and the historical reconstruction of monthly exposure concentrations must go back to the 1950's."); 2011 Clement Issue Paper, D.E. 372-4, at 6 ("However, due to limitations in our understanding of natural processes and due to inaccuracies in measurement methods, several complex models with many different model structures and initial conditions might fit these observations equally well.").

Because ATSDR made numerous assumptions as part of a complicated model to estimate PCE concentrations over a 30-year historic period for which there was no contaminant concentration data, its approach was scientifically unsound for the purpose of determining individual exposure levels. Dr. Hennet therefore took a different approach. He selected PCE flow paths that were representative of the ATSDR model's basic plume geometry and employed calculations based on fundamental geohydrology concepts to estimate the time it would take for PCE to arrive at well TT-26. D.E. 374-3 at 48-50. This approach provided information regarding which individuals at Tarawa Terrace may have been exposed to PCE at all. Moreover, this approach matches the approach recommended by PLG's proffered expert, Mustafa Aral, in his textbook that lists "key elements of a successful modeling effort" and includes a directive to "[s]implify the conceptual model, its mathematical interpretation and its user interface." Aral, Mustafa M, *Environmental Modeling and Health Risk*, D.E. 396-1 at 12; *see also* Konikow, Lenoard, *The Handbook of Groundwater Engineering*, Chap. 20, Groundwater Modeling, D.E. 370-2, at 20-18 - 20-19 ("In the development of a deterministic groundwater model for a specific

area and purpose, an appropriate level of model complexity (or, rather, simplicity) must be selected.”).

Dr. Hennet Opined that Hadnot Point Supply Well HP-634 Was Not Contaminated with TCE Based on His Interpretation of Records and Resulting Conclusions About Disputed Facts.

Dr. Hennet opined that well HP-634 was not contaminated with TCE because contamination was not detected when HP-634 was pumping and a high reported TCE detection, which some records attributed to methylene chloride, was from a sample shipment in which vials from other contaminated wells were broken. D.E 374-3 at 65. This opinion matters because, as Dr. Hennet explained in his report, had the ATSDR used “trace or low TCE values for HP-634, as supported by the data, [this] would [have] substantially decrease[d] the COC concentrations calculated by ATSDR for the raw water.” *Id.* at 70. Rather than following this scientifically sound approach, ATSDR used the reported 1,300 ug/L TCE detection at well HP-634 to calibrate the Hadnot Point model. D.E. 372-2, ATSDR, HP/HB Supp. 6 at 14, 16 Table S6.2. The resulting model assumed that *three* TCE sources entered directly into multiple aquifer layers close to well HP-634. D.E. 371-3 at 69, 70 Table A13.

As Dr. Hennet explained, he evaluated the sampling records for well HP-634, considered the geohydrology of Camp Lejeune, and applied fundamental principles of geochemistry to conclude that HP-634 was not contaminated. D.E. 374-3 at 15-34, 56-57, 64-66. The sampling records reflect that well HP-634 was sampled five times, and TCE was detected only once, as reflected in the following summary of relevant sampling dates and reported contaminant concentrations:

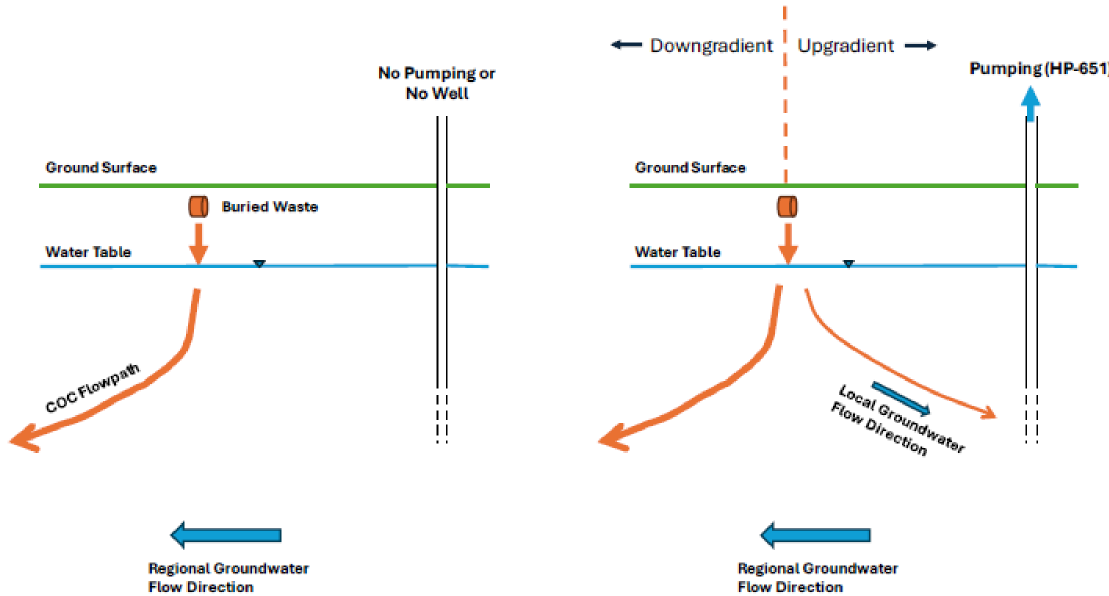
Well	Sample Date	PCE (ug/L)	TCE (ug/L)	All DCEs (ug/L)	VC (ug/L)	Pumping
HP-634	12/4/1985	None detected	None detected	None detected	None detected	Yes

HP-634	12/10/1985	None detected	None detected	2.3J	None detected	No
HP-634	1/16/1985	10	1,300	700	6.8	No
HP-634	11/12/1986	None detected	None detected	2.9	None detected	No
HP-634	1/22/1991	None detected	None detected	1.0J	None detected	No

See Ex. 1, ATSDR Hadnot Point / Holcomb Boulevard ("HP/HB") Ch. C Report, at C95 (HP-634 sampling results); D.E. 374-3 at 32, Exhibit I-9 (daily pumping of HP-634).

As the table shows, in a January 16, 1985, sample, TCE at a concentration of 1,300 micrograms per liter was reported for well HP-634. Ex. 1, ATSDR HP/HB Ch. C Report, at C95. This concentration that ATSDR used for well HP-634 far exceeded TCE detections in all other Hadnot Point supply wells except for two other wells: (1) well HP-651, which was the primary source of TCE contamination at Hadnot Point, and (2) well HP-602, which Dr. Hennet acknowledges was contaminated with TCE. *See id.* at Table C7; D.E. 374-3 at 64 ("Supply well HP-602's average measured TCE concentration over the period of the Act is 411 ug/L[.]"). In contrast to well HP-634, where TCE was typically not detected at all, TCE was repeatedly detected in wells HP-651 and HP-602 when they were operational supply wells. Ex. 1 at Table C7.

Dr. Hennet also evaluated whether HP-634 was supplying water to the Hadnot Point Water Treatment plant when it was sampled. D.E. 374-3 at 65. This is important because, as Dr. Hennet explained in his report, when wells were supplying water, their pumps could pull in water—and potentially water containing contaminants—that otherwise would have been down-gradient and tend to flow away from the well. *Id.* at 56-57. Dr. Hennet included an illustration, reproduced below, depicting this phenomenon in his report's discussion of another well, well HP-651:



Id. at 57.

The wells in the Hadnot Point system were cycled on and off to avoid intrusion of salt water or poor-quality water into the supply wells. *Id.* at 17. The only period for which daily records exist about which wells in the Hadnot Point system were supplying water reflects that well HP-634 was supplying water and had supplied water to the system for 4 of the 6 days prior to it being sampled on December 4, 1985, when contamination *was not* detected. *Id.* at 32. That HP-634 was sampled when it was pumping—and had been pumping for multiple days—was key to Dr. Hennet's analysis because it indicates that HP-634 was *not* pulling a downgradient TCE plume towards it and into the water supply.

The daily well cycling records also show that well HP-634 was *not* pumping and supplying water to the system when it was sampled on January 16, 1985, the date that one record reports a concentration of 1,300 ug/L of TCE. *Id.* at 32. In fact, the records show that well HP-634 did not pump *at all* between December 6, 1984, and February 5, 1985. *Id.* These records align with another record from a Camp Lejeune laboratory that reported that well HP-634 was "shut down

12/14/84[.]" *Id.* at 65. This evidence supports Dr. Hennet's conclusion that well HP-634 was not pulling contaminated water from a downgradient plume in January 1985 because it was no longer an active supply well. *See id.* ("One sample taken on January 16, 1985, when the well had already been shut down, reported a concentration of 1,300 ug/L for TCE."). The ATSDR water modeling reports also reflect that well HP-634 shut down in December 1984. D.E. 371-3 at 37, Fig. A5.

Dr. Hennet's opinion that well HP-634 was not contaminated with TCE is also based on the laboratory report for the January 16, 1985, result. The report identified two sample vials as "broken[,]" including a vial containing a sample from well HP-602, which Dr. Hennet acknowledged was contaminated with TCE; this caused Dr. Hennet to have concerns about sample cross contamination. D.E. 374-3 at 65. Dr. Hennet's opinion is also supported by historical records that attribute the 1,300 ug/L detection to methylene chloride contamination (rather than TCE), which is the reason that HP-634 was shut down. *Id.*

Dr. Hennet Used the Same Methodology as PLG's Expert Dr. David Sabatini to Opine that the Quantity of Contaminants of Concern Lost During the Filling of a Water Buffalo Through a Manhole Would be Similar to the Quantity Lost During Filling Through a Filler Pipe.

Dr. Hennet's opined that "[d]uring the filling of water buffaloes, a substantial portion of the [contaminants at issue] that might have been dissolved in the water would have been lost by volatilization to the air and thus removed from the water in the tank[,]" and that "[a]dditional [contaminants at issue] losses from the water in the buffaloes would have taken place due to temperature changes that forced air exchanges between the atmosphere and the air in the water buffaloes[,]" which, he explained "can be estimated." *Id.* at 74. He arrived at this opinion, as his report explains, based on basic principles of geochemistry and engineering techniques with which PLG's expert, Dr. Sabatini, agrees.

Under basic principles of geochemistry, the contaminants at issue "are highly volatile chemicals that preferentially partition to the air rather than remain[] in the water." *Id.* at 36-37. Moreover, "[t]he physical conditions for water storage . . . allow for air-water exchanges that result in COCs leaving the water for the air" at a magnitude that depends on properties of each contaminant, "including [1] the [contaminant's] affinity to volatilize to the air and [2] its solubility in water. These two properties are combined as a ratio referred to as the Henry's Law constant" which "is used to calculate the concentrations of a [contaminant] in air and water at equilibrium." *Id.* at 36–37.

Dr. Hennet applied these basic principles to calculate the amount of the COCs lost from the filling of a water buffalo through a filler pipe with a strainer using a model developed for calculating losses in a shower. *Id.* at 73-74). His report explains that "[t]he largest COC mass removal from the water is during fill-up of the tank [of a water buffalo] when conditions are ripe for volatilization, through increased contact between water and air due to the forcing of water through a strainer that generates water jets and droplets that greatly increase the surface area of the water/air interface[.]" *Id.* at 74). "The air containing COCs is expelled from the tank during filling" and filling itself "would involve spraying, splashing, and turbulent flow." *Id.*

PLG's rebuttal expert, Dr. Sabatini, agreed at his deposition that regardless of whether a water buffalo is filled via the manhole or the filler pipe, the best way to model COC losses during filling is the shower model Dr. Hennet used. Ex. 2, Sabatini Dep. at 313:20–314:19; *see* D.E. 374-3 at 74 (citing Little, J.C., 1992, *Applying the two-resistance theory to contaminant volatilization in showers,* Env't Sci. & Tech., 26(7), pp. 1341–49). Indeed, Dr. Sabatini used the shower model in his own calculation of COC losses during the filling of a water buffalo through a manhole. D.E. 349-6, Sabatini Report, at 21-22.

The only dispute between Dr. Hennet and Dr. Sabatini with respect to the method for calculating COC losses through manhole filling concerns whether to make adjustments to the input parameters of the shower model calculation in Dr. Hennet's report. Dr. Sabatini thinks that two adjustments should be made: (1) to account for a "lower area for mass transfer" due to the absence of a strainer and (2) to use a shorter time for volatilization due to increased downward water velocities. *Id.* at 21. Dr. Hennet disagrees that these adjustments are necessary because the increased splashing caused by the higher downward velocity of water in manhole filling would negate the differences that Dr. Sabatini identified. D.E. 374-2 at internally numbered 265:21–23. Dr. Hennet explained that COC losses to a water buffalo filled through a manhole are "comparable to what I calculated for the strainer," *id.* at internally numbered 265:25–266:1, because of "the large amount of aeration that [he] observed when the water buffalo was filled in 3 minutes and 23 seconds or so for 400 gallons," *id.* at internally numbered 265:21–23.

Both experts based their opinions on whether Dr. Hennet's calculation for filling through a filler pipe should be adjusted for filling through a manhole, in part, on their visual observations during the filling of a water buffalo through a manhole. *Id.* at internally numbered 121:16-19; D.E. 349-6 at 57-59.

Dr. Hennet Used Undisputed Chemical Phenomena to Opine that There Would Have Been COC Losses from Sorption During Water Treatment..

Dr. Hennet's report explains that in addition to COC losses from volatilization during water storage and treatment, COCs would also have been lost to sorption, i.e., removal from water through attachment to minerals, used in several water treatment processes. D.E. 374-3 at 46-48 (explaining that some COCs would "precipitate or sorb on the minerals"). He explains that these processes include spiractors, which remove iron and other metals by adding lime and catalyst sand to raw water. *Id.* This "results in the precipitation of minerals and mineral coatings in the

spiractors[,]" which is a "water softening treatment[.]" *Id.* at 46. In addition to the intended removal of iron and other metals, "[a] portion of the COCs in the water precipitate or sorb on the minerals and are thereby removed from the water." *Id*. As minerals and COCs precipitate, the catalyst sand and lime "increase in volume" such that they have to be "fully replaced and disposed of approximately every 2 months." *Id*. When the catalyst sand and lime are replaced, the COCs that sorbed onto the precipitated metals are lost too. *Id*. Dr. Hennet describes these losses as "likely significant but less than the volatilization losses." *Id.* at 47.

Another process that removed COCs through sorption was sand filters meant to remove suspended solids from the water supply. *Id.* at 47. Because the suspended solids include remaining catalyst sand from the spiractors, and the COCs sorbed onto them, Dr. Hennet explained that COCs were lost when the filters were "backwashed" periodically "to unclog the filters from trapped solids and the backwash water is disposed to waste." *Id*. Dr. Hennet describes these losses as "likely less than the volatilization losses but non-negligible considering the high frequency of backwashing which is necessary to remove the trapped solids from the filters." *Id.*

Dr. Hennet did not quantify COC losses from either category of sorption because he had no data on COC concentrations with which to make calculations. Because no data exist, losses from sorption are *not included* in Dr. Hennet's estimates of the percentage of COCs lost during water storage and treatment. *Id.* at 48. Instead, he referenced an environmental organic chemistry textbook chapter on sorption of neutral chemicals, such as the COCs, to estimate that the losses were smaller than volatilization losses, but "likely to be significant[,]" at the spiractors and "non-negligible" at the sand filters. *Id.* at 44, 47. The chapter explains that this type of sorption to minerals, such as spiractor catalyst sand, "may become significant" and identifies chemical properties of organic chemicals and mineral surfaces that influence the extent of sorption. Ex. 4,

Schwarzenbach, *Environmental Organic Chemistry*, Chapter 11 at 284-285 (1993). In fact, it specifically identifies sorption coefficients for PCE, which is one of the COCs. *Id.* at 286.

LEGAL STANDARD

An expert's testimony is admissible if it is relevant and reliable. *Neuse v. Ford Motor Company*, 848 F.3d 219, 229 (4th Cir. 2017) (citing *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 597 (1993)). Rule 702 states that an expert's testimony is reliable only if (1) "it is based upon sufficient facts or data," (2) "it is the product of reliable principles and methods," and (3) "the witness has applied the principles and methods reliably to the facts of the case." Fed. R. Evid. 702.

"Reliability is a 'flexible' inquiry that focuses on 'the principles and methodology' employed by the expert." *Sardis v. Overhead Door Corp.*, 10 F.4th 268, 281 (4th Cir. 2021) (quoting *Daubert*, 509 U.S. at 594-95). "In making its initial determination of whether proffered testimony is sufficiently reliable, the court has broad latitude to consider whatever factors bearing on validity that the court finds to be useful; the particular factors will depend upon the unique circumstances of the expert testimony involved." *Westberry v. Gislaved Gummi AB*, 178 F.3d 257, 261 (4th Cir. 1999) (citing *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 149-50 (1999)).

"However, the court should not resolve contested factual issues at the admissibility stage," *Mountain Valley Pipeline, LLL v. 0.32 Acres of Land*, 127 F.4th 427, 435 (4th Cir. 2025), as "'questions regarding the factual underpinnings of [an expert witness's] opinion affect the weight and credibility' of the witness' assessment, 'not its admissibility.'" *Bresler v. Wilmington Trust Co.*, 855 F.3d 178, 195 (4th Cir. 2017) (quoting *Structural Polymer Grp. v. Zoltek Corp.*, 543 F.3d 987, 997 (8th Cir. 2008)). "The emphasis . . . on 'sufficient facts or data' is not intended to authorize a trial court to exclude an expert's testimony on the ground that the court believes one

version of the facts and not the other." *Lightfoot v. Georgia-Pacific Wood Prod., LLC*, No. 5:17-cv-616-FL, 2018 WL 6729636 at *2 (E.D.N.C. Dec. 21, 2018) (quoting Fed. R. Evid. 702, Advisory Committee Notes (2000)). Thus, "the court need not determine that the expert testimony a litigant seeks to offer into evidence is irrefutable or certainly correct. As with all other admissible evidence, expert testimony is subject to being tested by '[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof.'" *Westberry*, 178 F.3d at 261 (quoting *Daubert*, 509 U.S. at 596).

ARGUMENT

I. Dr. Hennet Selected Flow Paths That Were Representative of the PCE Plume Geometry Predicted By the ATSDR and Determined Hydraulic Gradient Based on His Interpretation of the Data. Therefore, There is No Basis to Exclude His Opinion Regarding PCE Arrival Time at Tarawa Terrace.

PLG's complaint regarding Dr. Hennet's opinion on PCE arrival time at Tarawa Terrace well TT-26 is limited to the particular flow paths that Dr. Hennet selected. D.E. 374 at 13 ("Dr. Hennet does not provide a basis in his report for these flow paths being 'representative[.]'"). Dr. Hennet used three flow paths to determine a reasonable range of travel times. In one flow path, Dr. Hennet calculated the time for PCE to travel the horizontal distance between ABC One-Hour Cleaners and well TT-26 primarily in the shallow aquifer of layer 1. In another flow path, Dr. Hennet calculated the travel time for equal horizontal travel in layers 1 and 3. And, and in a third flow path, Dr. Hennet calculated the travel time for horizontal travel primarily in the deeper aquifer of layer 3. D.E. 374-3 at 49-50, 105-07. These three flow paths represented the general pathways predicted by the ATSDR's model of the PCE plume's geometry and evolution, as shown in the ATSDR's simulated plume figures reproduced in Dr. Hennet's report. *Id.* at 110-11.

Contrary to PLG's assertions, Dr. Hennet repeatedly explained his method for selecting these three representative flow paths at his deposition. After directing Dr. Hennet's attention to the

page of his report with an illustration of the representative flow paths, the following colloquy occurred:

> Q: How did you choose those three travel pathways at 25, 20, and 15?
>
> A: Well, I calculated the time it would take for the contaminant PCE dissolved in groundwater to travel to the well from ABC Cleaner, and ***I used as a basis a simplified setup which is the same as the ATSDR model used, the same layers, the same thickness of each layer, the same permeability in each layer and such.***
>
> And what I did as a hydrogreologist and a geochemist, I applied the fundamental equations of formulas of evaluating fate and transport when you don't have data to illustrate that basically you can get answers that are different from what ATSDR has done as far as the travel time that are as valid and even more in this case, because ATSDR made mistakes and errors in what they did at Tarawa Terrace on the parameters.
>
> I used parameters that were the same as in the Hadnot Point model, and I used [them] to calculate the retardation for those travel time. I relied on the site-specific data that the ATSDR did not consider even though it did exist.
>
> So nobody knows what happened in the domain where you have no data with any degree of reasonable scientific certainty. You have many ways that you can calculate travel times to arrive to a well.
>
> ***The thing I want to say, in this case, you are trying to calculate travel times for a period of 30 years during which you have zero data for the contamination arriving at the well. And you have two or three years – well, you have some data, and that data is a huge portal, if you wish, because it has a huge range. It goes from zero to hundreds.***
>
> ***So ultimately you have many ways to get through that portal. This is one way. This way here, is there's no fundamental error like in, like ATSDR has. It's a Tarawa Terrace model. And it is actually something that is – that I would rely on to give you what is a range, a reasonable range, and that's what I did.***

D.E. 374-2 at internally numbered 266:20–268:23 (emphasis added).

PLG then specifically asked why Dr. Hennet's flow paths were representative of what occurs with contamination at well TT-26. In response, Dr. Hennet explained that he selected flow

paths conforming to plume migration in layers 1 and 3 that was predicted by the ATSDR's model. He specifically stated:

> Q: What makes your three path flows representative of what actually occurred with contamination at well TT-26?
>
> A: ***This is the setup that – this setup, those layers, the permeability is in each one of those layers. The thickness of those layers in directly from the ATSDR model. I am not trying to critique those. I am just adopting them*** just to show if you do a calculation in the same framework that the ATSDR model is and you do it without mistakes or errors, you actually can get a representation that is like this.
>
> ***So it gives you representative travel time within a large range, which is meant to show that you don't have a single model that would tell you the truth because you don't know where the truth is when you don't have data.***
>
> Q: What makes the three pathways you chose representative of what occurred at TT-26?
>
> A: ***Well, similarly to what the ATSDR model represent, you have transport in layer one, and you have transport in layer three.*** And in order to go to the well, you have to basically end up in layer three because the well is screened in layer three, not in layer one.
>
> ***Now between the source, which is the ABC Cleaner, all the way to the well, you have basically many ways for the groundwater to get there. You don't go there through one single pathway.*** So that's why I choose some pathways, one which would go a short period of time in layer one and some of that contamination would go through the less permeable layer down to layer three and continue in layer three.
>
> I have another pathway that is closer to the well, and I have another pathway that is in between. Those are basically estimates that give you a range of travel time of this situation.

D.E. 374-2 at internally numbered 270:13–271: 25 (emphasis added).

PLG's insistence that Dr. Hennet "failed to identify or articulate a reliable methodology in support of his selection of 'representative flow paths,'" overlooks the entirety of Appendix D to his report and his clear deposition testimony that he selected flow paths from the source to TT-26 that were representative of the basic PCE plume geometry determined by the ATSDR's

groundwater modeling at Tarawa Terrace. D.E. 374 at 14. Furthermore, multiple PLG experts have opined that the ATSDR's simulated PCE concentrations, which derive from that same plume geometry, are "correct," "reliable," etc. *Id.* at 13-14; *see* D.E. 368 at 12 (United States' *Daubert* motion collecting citations). Therefore, in using the ATSDR's published reports on predicted plume geometry and evolution, Dr. Hennet "point[ed] to some objective source—a . . . published article in a reputable scientific journal or the like—to show that [he] ha[s] followed the scientific method, as it is practiced by (at least) a recognized minority of scientists in [his] field." *Daubert*, 43 F.3d at 1318–19; *see also Funderburk v. S.C. Elec. & Gas Co.*, 395 F.Supp.3d 695, 702, 720–21 (D.S.C. July 23, 2019) (denying motion to exclude expert testimony where movant "takes no issue with the reliability of that underlying data, only [the challenged expert's] interpretation and characterization of the event"). Dr. Hennet's selection of flowpaths for his opinion therefore meets Rule 702's admissibility threshold for reliability.

This is similar to the conclusion reached by the Western District of North Carolina in *Browder v. State Farm Fire and Casualty Company*, No. 1:20-cv-26, 2021 WL 2517681 (W.D.N.C. June 18, 2021). There, the court denied a defendant's motion to exclude testimony from a professional engineer about his opinions on the cause of structural damage to a home. *Id.* at *1. The defendant alleged that the opinions of plaintiff's expert were "not based on reliable principles or methodologies." *Id.* at *5. The court evaluated the challenged expert's "methodologies in comparison to those methods used by the other engineers who inspected Plaintiffs' home." *Id.* at *6. The court noted that four engineers had inspected the home, and "[w]hen considering the methodologies of the other three engineers, with whom Defendant does not raise an issue, [the challenged engineer]'s techniques appear to be similar." *Id.* It concluded

that "[b]ecause [the challenged engineer]'s methods are very similar to those of the other engineers, his methods likely have acceptance within a relevant scientific community." *Id.*

That is precisely the situation facing this Court with respect to Dr. Hennet's selection of flow paths. Both Parties' experts used flow paths through the ATSDR's conceptual model of the aquifer between ABC One-Hour Cleaners and well TT-26 to calculate PCE arrival times. *See* D.E. 369-11, Konikow Report, at 30; D.E. 374-3 at 49-50. Dr. Hennet then selected flow paths representative of the PCE plume geometry predicted by the ATSDR's models to calculate time for PCE to travel from ABC One-Hour Cleaners to well TT-26.[1]

Dr. Konikow offers a rebuttal opinion that a "more critical flow path" for PCE is travel in the shallow aquifer of layer 1 for the entire 1,000 horizontal feet between the PCE source at ABC One-Hour Cleaner to well TT-26. D.E. 369-11 at 29. But this is a difference of opinion, not a difference in methodology. Both Dr. Hennet and Dr. Konikow selected paths representative of possible ways a PCE molecule could travel to well TT-26. *Id.*; D.E. 374-3 at 49-50. Dr. Hennet explained that unlike Dr. Konikow, however, he was not estimating the earliest time at which an individual PCE molecule could possibly arrive at TT-26 under unrealistic conditions, but rather, "a reasonable range" of times for PCE to arrive based on the ATSDR's predicted plume evolution.[2]

[1] Conspicuously absent from PLG's motion is a challenge to Dr. Hennet's methodology of estimating arrival of PCE at well TT-26 using travel time calculations along representative flow paths. They cannot make such an argument because their expert, Dr. Konikow, employed the same method, but selected a different flow path. D.E. 369-11, Konikow Report, at 30 ("It is more likely that the travel distance in the shallower aquifer for much of the contaminated shallow groundwater would be more than 800 ft and the corresponding travel distance in the pumped aquifer would be less than 200 ft[.]. . . For this critical flow path, the travel time would be much less than 15 years – on the order of 3.5 to 5 years.").

[2] Prior to becoming an expert for PLG, Dr. Konikow thought it could have taken up to two years for PCE to reach the aquifer below ABC Cleaners before it even began traveling to well TT-26, which he thought likely occurred before 1968, but possibly later. D.E. 369-4 at 47:17-48:18.

D.E. 349-3 at internally numbered 268:22–23; *see also* D.E. 374-3 at 49 ("A PCE groundwater plume gradually developed in the pumped aquifer and ultimately led to the contamination of well TT-26, which is screened (open to allow groundwater to flow into the well) in the pumped aquifer. . . . The transport of dissolved PCE in the shallow aquifer (L1 . . .), through the low permeability clay layer (L2), and then through the pumped aquifer (L3) to supply well TT-26 took several years. . . . [Calculations] along three representative flow paths yields travel time for PCE between ABC Cleaners and TT-26 that are in the 15 to 25 years range.").

PLG also challenges Dr. Hennet's use of a constant hydraulic gradient, meaning the water pressure that drives the flow of groundwater, in his calculated PCE travel times along each representative flow path by mistakenly claiming that "Dr. Hennet does not and cannot explain why these large variations in hydraulic gradient, which can be readily estimated, should be disregarded." D.E. 374 at 13; *see* D.E. 374-3 at 16 ("The ability of groundwater to move depends on the aquifer permeability and the pressure gradient (hydraulic gradient). . . . The hydraulic gradient is what drives the flow of groundwater."). Contrary to PLG's representation, Dr. Hennet explained at his deposition that there were multiple reasons why he did not vary hydraulic gradient. First, he explained that the increased hydraulic gradient from well pumping would only occur "as you get very close to the well," and "before you get [PCE] close to the well, you would have a long way to go." D.E. 374-2 at internally numbered 269:19-21. Furthermore, Dr. Hennet explained that an increasing hydraulic gradient would "be less marked in layer one" which was where PCE traveled primarily in the flow path that resulted in earlier arrival at TT-26. *Id.* at internally numbered 269:10-13. These physical realities are reflected in ATSDR's figures showing simulated potentiometric levels—*i.e.*, levels of equal hydraulic gradient—that Dr. Hennet included in Attachment D to his report. In those figures, ATSDR's simulated potentiometric levels change less

quickly between ABC One-Hour Cleaners and well TT-26 in aquifer layer 1 than they do in layer 3. D.E. 374-3 at 109-10.

Finally, Dr. Hennet explained that "you have several things that you can say that would slightly accelerate or diminish" the travel time for PCE, including "things that would actually make [the travel times] longer." D.E. 374-2 at internally numbered 269:14-17. When Dr. Hennet tried to explain at his deposition phenomena that would extend PCE travel times (which also influenced his decision not to include adjustments for pumping-related acceleration), PLG cut him off. *Id.* at internally numbered 270:1-12 ("A: On the other end, on the other end, things that would actually elongate the time of travel are two major things. The first one – Q: Let me withdraw.").

PLG's complaints about the way in which Dr. Hennet calculated PCE travel times amount to nothing more than a disagreement with how he interpreted the available data about hydraulic gradients between ABC One-Hour Cleaner's and well TT-26. But "[a]n expert's opinion is not 'rendered inadmissible' when he disagrees with another's 'opinions and testing methods.'" *Browder v. State Farm Fire & Casualty Co.*, 2021 WL 2517681 at *7 (W.D.N.C. June 18, 2021) (quoting *Refrigeration Supplies, Inc. v. Acadia Ins. Co.*, No. 4:19-cv-2210, 2020 WL 7397002 at *1104 (E.D. Mo. Dec. 17, 2020).

In sum, both Dr. Hennet and Dr. Konikow calculated PCE arrival times using flow paths based on ATSDR's conceptual model of the aquifer, and Dr. Hennet selected flow paths based on the ATSDR's predicted plume geometry. Dr. Hennet's hydraulic gradient determinations are based on his interpretation of the available data given his expertise in the field. PLG has failed to raise an appropriate basis for exclusion of Dr. Hennet's opinion regarding the arrival of PCE at Tarawa Terrace well TT-26.

II. Dr. Hennet Concluded that Well HP-634 Was Not Contaminated with TCE Based on His Interpretation of Historical Records. Therefore, There is No Basis to Exclude His Opinion.

PLG does not challenge Dr. Hennet's methodology for concluding that well HP-634 was not contaminated with TCE; nor do they claim that Dr. Hennet had insufficient facts or data to reach that conclusion. These are the appropriate bases for an admissibility challenge. *See Mountain Valley Pipeline, LLL v. 0.32 Acres of Land*, 127 F.4th 427, 435 (4th Cir. 2025) ("the correct inquiry at the admissibility stage is . . . only whether the expert's methodology was reliable and was based on sufficient facts or data"); *see also* D.E. 374 at 10-12. Instead, PLG takes issue with Dr. Hennet's interpretation of the historical data relevant to contamination in and around well HP-634. Some of their complaints are logical fallacies, such as their straw-man argument that well HP-634's sample vial was not reported among those from the January 16, 1985, sample set that the laboratory noted were broken on receipt. That is true, but as Dr. Hennet explained at his deposition, among the broken vials was a sample from the TCE-contaminated well, HP-602, which was shipped with the sample from well HP-634, providing a plausible source of contamination for the sample from well HP-634. *Id.* at 10; D.E. 374-2, at internally numbered page 195:19–24. Some records additionally reflect that a sample vial from well HP-651, the driver of TCE contamination at Hadnot Point, was also broken. Ex. 2, Hennet Dep. Ex. 18 at 7.

Similarly, PLG's argument that HP-634 must have been contaminated with TCE, because ATSDR's Hadnot Point-Holcomb Boulevard *model* showed that HP-634 was impacted by TCE in the groundwater, is circular. D.E. 374 at 11. Because the ATSDR calibrated its model to the 1,300 ug/L (very likely inaccurate) TCE sample from HP-634, the ATSDR assumed that three distinct TCE contamination sources existed close to well HP-634 and placed them in their model. *See* D.E.

D.E. 371-3 at 69, Table A13. This inevitably and obviously resulted in TCE impacting HP-634 in the ATSDR's model.

Other PLG complaints concern the relative probative value of various historical documents. *See, e.g.*, D.E. 374 at 10 ("Dr. Hennet provides no explanation as to why summary reports should be trusted or believed over the primary source laboratory report."). Still other complaints accuse Dr. Hennet of inconsistently interpreting historical data but fail to acknowledge important differences in thse data. For example, PLG argues that it is inconsistent for Dr. Hennet to opine that well HP-634 was not contaminated with TCE while failing to also opine that TT-26 was not contaminated even though both wells showed similar variation in measured concentrations. *Id.* at 11. This argument ignores the fact that well TT-26's high PCE concentrations were from samples taken when it was an active supply well, but its low PCE concentrations were from samples taken after it had been permanently shut down; this is consistent with the pumping of the well pulling the contaminant plume towards TT-26. In contrast, well HP-634 had been shut down and was not pumping at the time of the high TCE detection; this detection is inconsistent with the theory that the pumping well was pulling a contaminant plume towards HP-634.[3] *See* D.E. 374-3 at 57) (explaining how *pumping* wells can pull contaminant sources to them that would otherwise be downgradient); D.E. 370-3, ATSDR Tarawa Terrace Ch. A, at 34, Table A6 (TT-26 service dates).

None of these complaints are valid bases to exclude Dr. Hennet's opinions under Rule 702 because they all depend on resolving contested factual underpinnings of his opinions. "[T]he court

[3] Records of daily well pumping operations do not exist for Tarawa Terrace, though dates when wells entered into and out of service largely to exist, and TT-26 remained an active supply well when high PCE concentrations were detected in it. D.E. 370-3 at 33-34 & Table A6 (discussing available well operation data).

should not resolve contested factual issues at the admissibility stage[,]" *Mountain Valley Pipeline, LLL v. 0.32 Acres of Land*, 127 F.4th 427, 435 (4th Cir. 2025), because "'questions regarding the factual underpinnings of [an expert witness's] opinion affect the weight and credibility' of the witness' assessment, 'not its admissibility.[,]'" *Bresler v. Wilmington Trust Co.*, 855 F.3d 178, 195 (4th Cir. 2017) (quoting *Structural Polymer Grp. V. Zoltek Corp.*, 543 F.3d 987, 997 (8th Cir. 2008)).[4] Rule 702's "emphasis . . . on 'sufficient facts or data' is not intended to authorize a trial court to exclude an expert's testimony on the ground that the court believes one version of the facts and not the other." *Lightfoot v. Georgia-Pacific Wood Prod., LLC*, No. 5:17-cv-616-FL, 2018 WL 6729636, at *2 (E.D.N.C. Dec. 21, 2018) (quoting Fed. R. Evid. 702 advisory committee's notes to 2000 amendment). Instead, "the correct inquiry at the admissibility stage is ... only whether the expert's methodology was reliable and was based on sufficient facts or data ..." *Mountain Valley Pipeline, LLL v. 0.32 Acres of Land*, 127 F.4th 427, 435 (4th Cir. 2025). Because PLG does not challenge Dr. Hennet's actual methodology and because Dr. Hennet had sufficient facts and data to reach his conclusion, his opinion is admissible.

Given the legal framework, the case on which PLG relies is clearly inapposite. In *In re Lipitor (Atorvastatin Calcium) Marketing, Sales Practices and Products Liability Litigation*, 892 F.3d 624 (2018), the Fourth Circuit upheld a district court's decision to exclude testimony from an expert who adopted a statistical analysis *method* only after obtaining an unfavorable result with another statistical analysis method, then applied the results of the cherry-picked method in a subsequent analysis. *Id.* at 634. The reasoning did not turn on a dispute about historical facts or

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[4] Because disputed facts cannot form the basis of a valid motion to exclude expert testimony under Rule 702, the United States has not moved to exclude PLG's experts' ill-conceived rebuttal opinions that HP-634 was contaminated.

the proper interpretation of historical data. *Id.* Here, the central issue is a dispute on a historical fact about whether an anomalous sampling measurement from well HP-634 was accurate. Such "'questions regarding the factual underpinnings of [an expert witness's] opinion affect the weight and credibility' of the witness' assessment, 'not its admissibility,'" so PLG's argument fails. *Bresler* 855 F.3d at 195 (quoting *Structural Polymer Grp.*, 543 F.3d at 997).

III. Dr. Hennet Estimated COC Losses From Filling a Water Buffalo Through a Manhole By Employing the Same Methodology He Applied to Filling a Water Buffalo Through a Filler Pipe Which Was Also Used By PLG's Expert. Therefore, His Opinion Should Not Be Excluded.

PLG claims that Dr. Hennet's conclusion that COC losses from filling a water buffalo through a manhole were comparable to those from filling a water buffalo through a filler pipe were based on "his observation of one water buffalo in 2025[,]" from which he "took no measurements, collected no data, and performed no calculations[.]" D.E. 374 at 6. This is patently incorrect. Dr. Hennet's method for estimating COC losses at water buffaloes filled through a manhole involved calculating losses using a method developed for showers. This method is explained in Dr. Hennet's report, and it is the same method used by PLG's expert, Dr. Sabatini. *See* Ex. 3, Sabatini Dep. at 313:20–314:19; D.E. 374-3 at 74 (citing Little, J.C., 1992, *Applying the two-resistance theory to contaminant volatilization in showers,* Env't Sci. & Tech., 26(7), pp. 1341–49); D.E. 349-6 at 21-22. Dr. Hennet's observation of the filling of a water buffalo through a manhole only confirmed that his filler pipe COC loss calculations were equally applicable. Dr. Hennet's opinion was therefore "based on scientific, technical other specialized *knowledge* and not on belief or speculation, and inferences [were] derived using scientific or other valid methods." D.E. 374 at 6 (quoting *Oglesby v. General Motors Corp.*, 190 F.3d 244, 250 (4th Cir. 1999)).

PLG's reliance on cases excluding expert testimony that is based "solely on visual observations" is misplaced. D.E. 374 at 6–7. The "visual estimates" case that PLG cites bears little

resemblance to Dr. Hennet's observation of aeration or splashing in the filling of a water buffalo through a manhole. In *Precision Fabrics Group, Inc.*, v. *Tietex Int'l, Ltd.*, No. 1:13-cv- 645, 2016 WL 6839394 (M.D.N.C., Nov. 21, 2016), an expert claimed to have *observed with the naked eye* "near microscopic swelling of a 45-micron sized film" and used this super-human observation in a method that "is not proven to produce reliable results." *Id.* at *8. Those circumstances are much different than Dr. Hennet's observation of the aeration of water in the filling of a water buffalo through a manhole and his determination of how that might affect his calculation of losses of filling of a water buffalo through a filler pipe. The importance of aeration, as both Dr. Hennet and Dr. Sabatini acknowledge, is that it increases the surface area between air and water, which increases the rate of COC losses. D.E. 374-2 at 262:12-266:1; Ex. 3, Sabatini Dep. At 88:20-25. Dr. Hennet did not claim that he could see the COCs, only the aeration. *Id.*

Indeed, the court in *Precision Fabrics* recognized that "[i]n some instances visual observation could produce a reliable result." *Id.* It simply concluded that *microscopic swelling* was not such an instance. *Id.*; *cf. Ruark v. BMW of North America, LLC*, No. CIV.A ELH-09-2738, 2014 WL 351640, at *10 (D. Md. Jan. 30, 2014) (allowing expert testimony where expert "did not conduct any trace analysis or other scientific testing on the scuff marks, however. Instead, [the expert] simply made the visual observation that the scuff marks appeared to match aspects of the hat."). Because PLG does not challenge Dr. Hennet's actual methodology in calculating COC losses—which is the same as Dr. Sabatini's—Dr. Hennet's opinion is admissible.

Further, the Court should not consider PLG's discovery-based arguments for excluding Dr. Hennet's opinion because they are irrelevant to admissibility of Dr. Hennet's opinion under Fed. R. Evid. 702. Magistrate Judge Jones already denied PLG's discovery-based motion seeking to exclude Dr. Hennet's opinions based on his observations during his February 2025 site visit to

Camp Lejeune, including the filling of a water buffalo through a manhole. *See* D.E. 380 (order denying motion to exclude Dr. Hennet's opinion from February 2025 site visit); *compare* D.E. 374 at 5-6 *with* D.E. 349. Judge Jones found that "PLG cannot really show surprise" at the information Dr. Hennet learned from his site visit and that "Dr. Hennet did not change his opinions based on the February Site Visit." D.E. 380 at 9. He further found that at least some of the need to consider manhole-based filling was PLG's fault in disclosing late factual information with their rebuttal expert's report. *Id.* Judge Jones ruled that exclusion was inappropriate, and any prejudice to PLG from Dr. Hennet's opinions related to his February 2025 site visit would be cured with additional deposition time with Dr. Hennet, which Judge Jones ordered. *Id.* at 9. PLG did not appeal Magistrate Judge Jones's order under the local rules, and PLG has made no attempt to connect it to reliability under Rule 702, so the Court should not consider PLG's rehashed discovery argument now. *See* Local R. Civ. P. 72.4(a)(1) (appeals from a magistrate judge's order must be filed within 14 days of service).

IV. Dr. Hennet Concluded that There Would Have Been Sorption Losses During Treatment Based on Published Literature and 30 Years of Experience as a Ph.D. Geochemist Studying the Fate and Transport of Organic Chemicals in the Environment. Therefore, His Opinion Should Not Be Excluded.

Dr. Hennet concluded that a non-negligible or significant portion of COCs were lost to sorption during water treatment. This opinion was primarily based on chemical phenomena recognized by PLG's own experts and described in a textbook that Dr. Hennet cited, which referenced one of the same COCs at issue in this case. *Compare* D.E. 374 at 7-9 *with* D.E. 374-3 at 47-48. Dr. Hennet also relied on his extensive education and experience studying the fate of the COCs and other organic chemicals in the environment to qualitatively opine on the magnitude of COC losses. Because of insufficient data, Dr. Hennet acknowledged that he could not quantify the losses. D.E. 374-3 at 47.

To determine whether COCs would have been lost to sorption during water treatment, Dr. Hennet studied the water treatment systems historically employed at Camp Lejeune, considered the nature of COCs found in the systems, and applied fundamental geochemical sorption concepts. *Id.* at 20-23, 25, 46-47. Dr. Hennet relied on his professional experience to *qualitatively* assess the magnitude of COC losses in accordance with the factors described in the cited textbook. *Id.* at 46-47. PLG's expert, Dr. Sabatini, acknowledged that COC losses to sorption would have occurred, but disagreed with Dr. Hennet's *qualitative* assessment of the extent of sorption losses based on Dr. Sabatini's own professional judgment. *See* D.E. 374-5 at 12-13 (concluding sorption losses would be negligible); Ex. 3, Sabatini Dep. at 220:22-221:2 (agreeing that TCE sorption on inorganic materials removed in the spiractor would be negligible or minor), 222:2-12 (agreeing with the possibility of TCE sorption on inorganic surfaces). Dr. Hennet's reliance on a textbook confirming that nonpolar chemicals like the COCs sorb onto minerals like the spiractors catalyst sands provides "some objective source . . . show[ing] that [he] ha[s] followed the scientific method, as it is practiced by (at least) a recognized minority of scientists in [his] field[,]" meeting Rule 702's reliability threshold for admissibility. *Daubert*, 43 F.3d at 1318–19; *see also Funderburk*, 395 F.Supp.3d at 702, 720–21 (denying motion to exclude expert testimony where movant "takes no issue with the reliability of that underlying data, only [the challenged expert's] interpretation and characterization of the event.").

PLG's contrary arguments are unsound. PLG incorrectly claims that the textbook chapter that Dr. Hennet cited does not support the conclusion that a portion of COCs were removed by sorption onto minerals during water treatment. D.E. 374 at 8-9. That chapter, which PLG did not provide to the Court, discusses "neutral organic chemicals," and Dr. Hennet's report explains the COCs are such neutral organic chemicals. D.E. 374-3 at 25. Further, the chapter specifically states

that sorption of such chemicals onto mineral surfaces "may become significant." Ex. 4, Schwarzenbach at 284. The chapter also lists a sorption coefficient for one of the specific COCs that is at issue in this case. *Id.* at 286.

PLG similarly claims that Dr. Hennet failed to explain whether sorption losses are "intended" or "incidental" to treatment or that he failed to comment on retention time. These complaints are irrelevant because they do not affect Dr. Hennet's *qualitative* opinions that losses occurred. D.E. 374 at 8-9.

Furthermore, Dr. Hennet is obviously qualified to offer opinions about sorption of organic chemicals, including the COCs, to minerals based on his extensive education and experience in geochemistry, and, in particular, the fate of organic chemicals. Dr. Hennet holds a Doctor of Philosophy in Geochemistry from Princeton University in addition to university degrees in hydrogeology and geology. D.E. 374-3 at 80. He is also a licensed professional geoscientist in Texas and a certified professional geological scientist from the American Institute of Professional Geologists. *Id.* He is a member of both the American Chemical Society and the Association of Groundwater Scientists and Engineers, has numerous publications in the fields of organic geochemistry, and has "more than 30 years of research and profession experience" specializing "in evaluating the origin, fate, and transport of organic . . . chemicals in the environment." *Id.* at 80. This education and experience are precisely of the sort that allow Dr. Hennet to conclude that the fate of some of the dissolved organic COCs that entered water treatment plants at Camp Lejeune was sorption onto the sands and suspended solids they encountered during water treatment.

CONCLUSION

For the foregoing reasons, the Court should deny PLG's motion to exclude Dr. Remy Hennet's opinions that: (1) PCE likely arrived at Tarawa Terrace water supply well TT-26 in the 1970s, (2) Hadnot Point water supply well HP-634 was not contaminated with TCE, (3) COC losses at water buffaloes filled through the manhole were comparable to losses at water buffaloes filled through filler pipes, and (4) there were COC losses to sorption during water treatment.

Dated: June 4, 2025

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CERTIFICATE OF SERVICE

I hereby certify that on June 4, 2025, a copy of the foregoing document was served on all counsel of record by operation of the court's electronic filing system and can be accessed through that system.

/s/ Allison M. O'Leary
ALLISON M. O'LEARY